SUDEYKIN, V.A.; KHARLAMOV, V.P.; SUDEYKINA, M.V.

Studying the migration of gray rats by means of radioactive tracers in a large city. Zool. zhur. 41 no.9:1409-1412 S '62. (MIRA 15:11)

1. Moscow Urban Disinfection Station and Medical Service of the Military Marine Fleet.
(Animal migration) (Moscow--Rats)

SHURA-BURA, B.L.; KHARLAMOV, V.?.

Autoradiography as a method of tracing labeled rodents and their ectoparasites in studying migration problems. Zool. zhur. 40 no. 2:258-263 F '61. (MIRA 14:2)

1. Department of Epidemiology, S.M. Kirov Military Medical Academy (Leningrad).
(Animals, Marking of) (Autoradiography)
(Parasites—Rodentia)

SOV/16-59-6-39/46

17(2,9)

AUTHOR: Kharlamov, V.P.

TITLE: The Possibility of Using Fish From Far East Fisheries for Preparing Bacteriological Nutrient Media. Author's Summary.

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1959, Nr 6, p 132 (USSR)

ABSTRACT: Studies were made of the ability of fish enzymes to break down the proteins of fish from Far East Fisheries and of the possibility of using the products of this splitting process in preparing nutrient media. The fish studied were, among others, flounders and mackerel, also test samples of food fish protein from the Belkovyy zavod (Protein Plant) of the Putyatinskiy rybokonservny kombinat (Putyatino Fish-canning Kombinat). The fish digest was prepared as follows: the fish were beheaded, detailed and gutted, carefully washed, placed in water (2 liters of water per kg of fish) and boiled for 5 minutes. The fish broth was filtered through gauze and cooled to 40-30°C. The bones were removed from the fish which was then put through a mincer and covered with the broth. To this was added the gastric or intestinal stuffing and chloroform. The time taken to effect full break-down of protein

Card 1/2

was taken as the index to the fish ferments' activity. The ready media were checked for the number of colonies (and their content) and the preservation of biochemical and serological properties on the part of various bacterial strains after 10 sub-cultures on the media. The strains tested were: Salmonella typhosa, Salmonella paratyphi, Shigella flexneri and Escherichia coli. The results of the tests showed that the fish enzymes broke down the fish protein quite satisfactorily and could therefore be used for preparing peptone from fish. The fish digests also proved quite satisfactory for the preparation of bacteriological nutrient media.

ASSOCIATION: Voyenno-meditsinskaya ordena Lenina akademiya imeni Kirova (Order of Lenin Military Medical Academy imeni Kirov)

SUBMITTED: May 22, 1958

Card 2/2

KHARLAMOV, V. P.

Plodovo-iagodnyi sad Krasnorechenskogo sovkhoza [Fruit and berry orchard of Krasnorechensk State Farm]. Khabarovsk, 1953. 28 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 5, August 1953

KHARLAMOV, V. P., Cand Agr Sci -- (diss) "Fertilization of fruit-berry crops in the sod-podsolic zone." Moscow, 1960. 18 pp; (Moscow Order of Lenin Agricultural Academy im K. A. Timiryazev); 120 copies; price not given; list of author's works on pp 17-18 (15 entries); (KL, 17-60, 164)

KHARLAMOV, V.P., kand.sel'skokhozyaystvennykh nauk

Expand the acreage of forage lupine in White Russia. Zemledie 24 no.3:49-51 Mr '62. (MIRA 15:3)

1. Zaveduyushchiy Pruzhanskim gosudarstvennym sortoispytatel'nym uchastkom plodovo-yagodnykh kul'tur.
(White Russia--Lupine)

KHARLAMOV, Nikolay Filippovich; KHARLAMOV, V.A., red.

[Erecting apartment houses with built-up roofs in Yakutiia] Vozvedenie zhilykh zdanii s sovmeshchennymi kryshami v Iakutii. Iakutsk, Iakutskoe knizhnoe izd-vo, 1963. 78 p. (MIRA 17:8)

SOV/127-58-2-25/26

AUTHORS: Belash, F.N., Doctor of Technical Sciences, Professor; Delitsina, G.B., Karmazin, V.I. and Kharlamov, V.S., Candidates of Technical Sciences, Azarov, A.L., Dolotova, I.A. and Roveńskiy, I.I., Engineers

TITLE: The Concentration and Agglomeration of Minerals in North-Western Regions of the USSR (Obogashcheniye i aglomeratsiya poleznykh iskopayemykh Severo-Zapadnykh rayonov SSSR). Leningrad, Mekhanobr, 1957, vol. 102, 344 pp. with illustrations. Circulation 1,700. Price 12 rubles. (Leningrad, Mekhanobr, 1957, vyp. 102.344 str.s ill. Tirazh 1,700. Tsena 12 rub.)

PERIODICAL: Gornyy zhurnal, 1958, Nr 12, pp 67 - 69 (USSR)

ABSTRACT: This is a review of the above mentioned book by F.N. Belash et al

Card 1/1

BELASH, F.N., prof.; KHARLAMOV, V.S., kand. tekhn.nauk
KIRNOSOV, E.G., inzh.

Middlings of the Kamsh-burun factory as a subject for gravity concentration. Izv. vys. ucheb. zav.; gor. zhur. no.4:146-151 '61. (MIRA 14:6)

1. Rekomendovana kafedroy obogashcheniya poleznykh iskopayemykh Krivorozhskogo gornorudnogo instituta. 2. Krivorozhskiy gornorudnyy institut (for Belash, Kharlamov, Kirnosov). 3. Kamyshburunskiy zhelezorudnyy kombinat (for Burova).
(Kerch Peninsula--Ore dressing)

KHARLAMOV, V. S., Cand Tech Sci -- (diss) "Investigation of the carbon flotation in electrolytes." Len, 1957. 15 pp. with graphs. (Min Higher Ed USSR, Leningrad Order of Lenin and Labor Red Banner Min Inst im G. V. Plekhanov, Chair Enrich Min Resources). (KL, 9-58, 120)

KHARLAMOV, V.S.

137-1958-3-4526

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 7 (USSR)

AUTHOR: Kharlamov, V.S.

TITLE: On Possible Causes Producing Flotation of Minerals by Means of Electrolytes (O vozmozhnykh prichinakh, vyzyvayushchikh flotatsiyu mineralov elektrolitami)

PERIODICAL: Obogashcheniye rud, 1957, Nr 2, pp 25-30

ABSTRACT: In order to explore the causes of flotation of minerals by electrolytes (E), experimental flotation of galenite, molybdenite, pyrite, calcite, and other minerals was carried out in solutions of Na_2SO_4, NaCl, and $NaNO_3$. Simultaneously, experiments were performed to determine the froth-producing qualities of all the E's mentioned. Experiments showed that galenite, pyrite, and other similar minerals are not floatable by any of the E's tested. Talcum, S, and others are floatable by all frothing E's. It may also be stated that the formation of froth is not a determining cause of flotation by an E, and it must be recognized, therefore, that the presence of salts reduces the hydrophile properties of the surface, and that it is this fact which is the primary cause of flotation. It may be assumed that the E, while

Card 1/2

On Possible Causes Producing Flotation of Minerals (cont.)

changing the properties of the double electrical surface film, also changes the degree of its hydration. The occurrence of dehydration may be explained by the phenomena taking place on the surface and consisting only in changes in the electric properties of the latter, and by the changes of the liquid phase throughout the entire volume. This change of properties in the liquid phase of the volume is one of the factors responsible for flotation by an E. The last assumption is in accord with data obtained from flotation experiments.

A. Sh.

Card 2/2

KHARLAMOV, V.S., kand.tekhn.nauk

Comparing the industrial indices of coal flotation in electrolytes and with sulfonated kerosene. Izv.vys.ucheb.zav.; gor.zhur. no.1:138-143 '60. (MIRA 13:6)

1. Krivorozhskiy gornorudnyy institut. Rekomendovana kafedroy obogashcheniya poleznykh iskopayemykh.
(Coal preparation) (Flotation--Equipment and supplies)

KHARLAMOV, V.S., kand. tekhn. nauk

Desulfuration of coals by saline flotation. Sbor. nauch. trud. KGRI no.10:349-350 '61 (MIRA 17:8)

KHARLAMOV, V.S., kand.tekhn.nauk

Application of varying statistics to technological sampling of iron quartzites. Izv. vys. uch. zav.; gor. zhur. 5 no.6:188-193 '62. (MIRA 15:9)

1. Krivorozhskiy gornorudnyy institut. Rekomendovana kafedroy obogashcheniya poleznykh iskopayemykh.
(Ores--Sampling and estimation) (Iron ores)

KHARLAMOV, V.S.

Accuracy in the determination of technological indices of iron quartizite dressing. Obog.rud 7 no.1:45-48 '62. (MIRA 15:3)

1. Krivorozhskiy gornorudnyy institut.
(Ore dressing) (Iron ores)

BELASH, F.N.; KAMENEV, P.Ya.; FAYNSHTEYN, E.G.; KHARLAMOV, V.S.; ZAYTSEV, I.F.

Radiometric dressing of pieces of iron ore. Sbor. nauch. trud. KGRI no.13:208-211 '62. (MIRA 16:8)

1. Krivorozhskiy gornorudnyy institut (for Kharlamov).
2. Ukrainskiy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut po obogashcheniyu i briketirovaniyu ugley (for Zaytsev).

(Iron ores) (Ore dressing)
(Radioisotopes—Industrial applications)

KHARLAMOV, V.S., dotsent, kand. tekhn. nauk

Efficient flow sheets for the dressing of Belozerka deposit iron ores. Sbor. nauch. trud. KGRI no.17:76-94 '63.
(MIRA 17:1)

KHARLAMOV, V.S., dotsent, kand. tekhn. nauk; SKOROBOGAT'KO, M.P., inzh.

Analysis of the connection between the physical properties of petrographic varieties of ores and their iron content. Sbor. nauch. trud. KGRI no.17:122-127 '63. (MIRA 17:1)

KHARLAMOV, V.S., dotsent, kand.tekhn.nauk; BASS, M.Ya., inzh.

The time of separation in an important parameter for regulating the technological indices of concentration in heavy suspensions. Sbor.nauch.trud. KGRI no. 21:247-251 '63. (MIRA 17:7)

SHINKORENKO, Stanislav Fedorovich; MARGULIS, Vladimir Solomonovich; NIKOLAYENKO, Viktor Pavlovich; KHARLAMOV, Vadim Sergeyevich; DROZHILOV, Lev Aleksandrovich; GUBIN, Georgiy Viktorovich; OSTAPENKO, Pavel Yefimovich; KARAMZIN, V.I., prof., doktor tekhn. nauk, retsenzent; RYKOV, N.A., otv. red.

[Handbook on the dressing and sintering of ferrous metal ores] Spravochnik po obogashcheniiu i aglomeratsii rud Chernykh metallov. [By] S.F.Shinkorenko i dr. Moskva, Nedra, 1964. 571 p. (MIRA 18:2)

KHARLAMOV, Vadim Sergeyevich; NIKOLAYENKO, Viktor Pavlovich; RYKOV, N.A., otv. red.

[Dressing of ferrous metal ores] Obogashchenie rud chernykh metallov. Moskva, Nedra, 1965. 239 p. (MIRA 18:4)

KHARLAMOV, V.T.

KHARLAMOV, V.T.

Methods of preparing analytical samples of alkali metals for vacuum extraction. Trudy kom.anal.khim. 10:117-121 '60. (MIRA 13:8)
(Alkali metals)

DYKHOVA, Z.I.; MATYUSHINA, N.A.; MOSKVINA, M.I.; PACKAYEVA, G.I.; KHARLAMOV, V.T.; CHIRKOV, Ye.P.; FODOR, G.; FILIP, I.

[Radioactive isotopes and labeled compounds; a catalog] Radioaktivnye isotopy i mechenye soedineniia; katalog. Moskva, Atomizdat, 1964. 341 p. (MIRA 18:1)

1. Sovet ekonomicheskoy vzaimopomoshchi. Postoyannaya komissiya po ispol'zovaniyu energii v mirnykh tselyakh.

BAKHMUTSKIY, F.I., inzh.; OROKHOVSKIY, I.I.; KHARLAMOV, V.V., inzh.; ROZENFEL'D, V.Ye., doktor tekhn.nauk; STAROSKOL'SKIY, N.A., kand.tekhn.nauk, dots.

Mine haulage by means of high-frequency electric locomotives. Ugol' 35 no.6:29-33 Je '60. (MIRA 13:7)

1. Dongiprouglemash (Bakhmutskiy, Orokhovskiy, Kharlamov). 2. Moskovskiy energeticheskiy institut (for Rozenfel'd, Staroskol'skiy).
(Mine railroads)
(Electric locomotives)

[illegible] naphtha-

[illegible]omolekulyarnyye soyedineniya, v. [illegible]

[illegible] polyester, heterochain compound, polyarylate, dihydroxynaphthalene, diol

Abstract: The synthesis of mixed polyarylates was accomplished by polycondensa-
[illegible] isomers of dihydroxynaphthalene, diol, and the chlorides of terephthalic, isophthalic, adipic and sebacic acids in chloroform, at temperatures ranging [illegible] for periods of 1 to 10 hours. The polymer films were cast on [illegible] of terephthalic acid were mostly of mixed crystalline-amorphous structure and had softening points from 500-130C, the highest belonging to the 1,3-isomer. Where isophthalic acid was the base, the softening point had a range of 400-250, and it showed a still lower range of 190-5C with adipic acid, going still further [illegible] sebacic acid, ranging from 35C to -18C. Thus it seems that increasing the number of methylene groups in the aliphatic dicarbonic acids from 4 to 8 causes

Card 1/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721820019-1"

AP7024126

... in the softening-point temperature, which was also found to be accom- ... solubility and a lower crystallization ... polymers ... adding the x-ray ... tables.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Elemento-organic Compounds, Academy of Sciences SSSR)

SUBMITTED: 01Nov61 DATE ACQ: 01Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 005 OTHER: 000

Card 2/2

BESPROZVANNYY, M.A.; KONONOV, N.F.; KHARLAMOV, V.V.

Formation of free radicals in the catalytic reduction of carbon tetrachloride. Izv. AN SSSR. Ser. khim. no.8:1345-1350 '65. (MIRA 18:9)

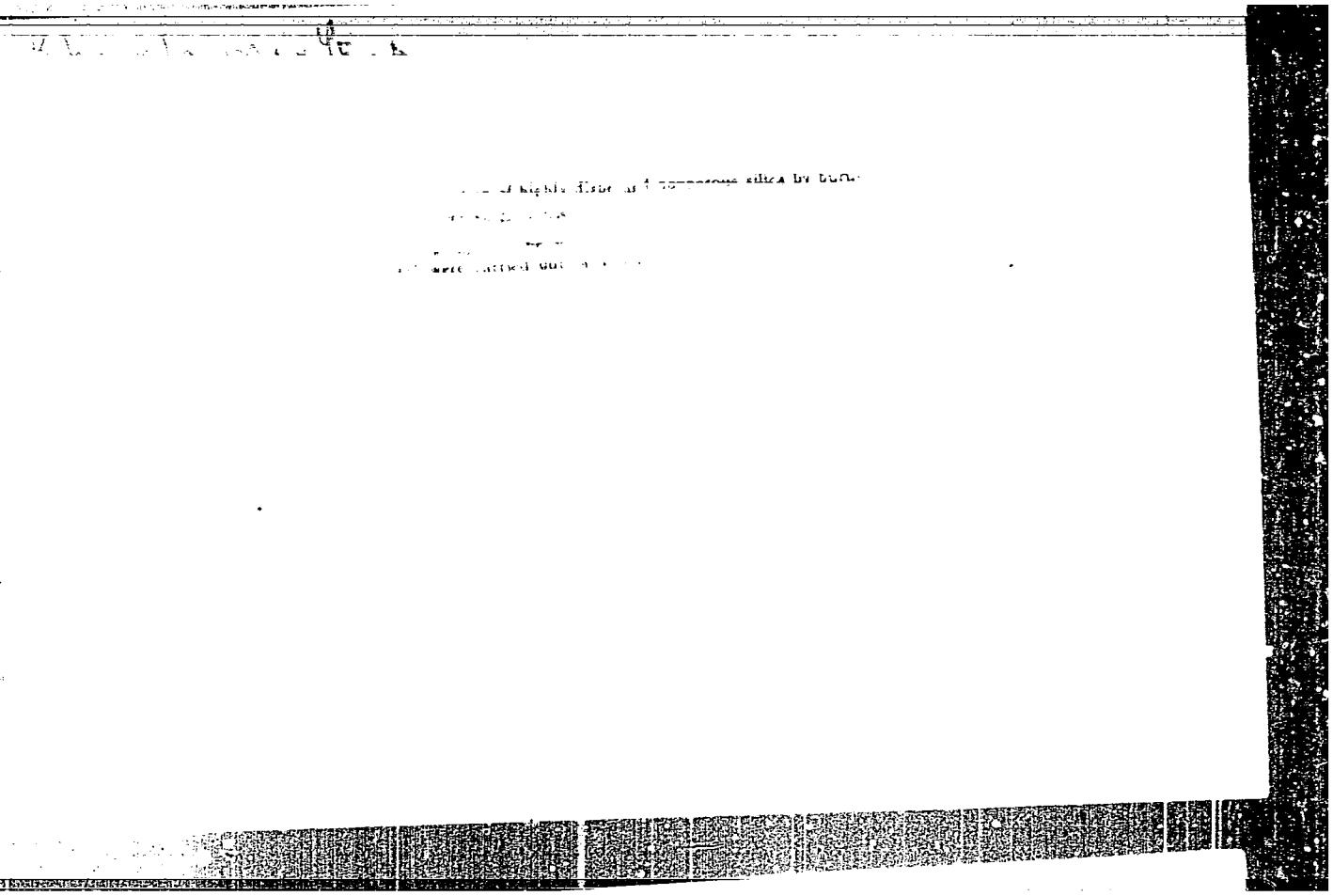
1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

VLASENKO, V.M.; PISAREV, V.F.; SOBOLEVA, A.S.; KHARLAMOV, V.V.; YUZEFOVICH, G.Ye.

Industrial catalytic purification of a nitrogen-hydrogen mixture by the removal of carbon monoxide and carbon dioxide. Khim. prom. no.8:583-586 Ag '63. (MIRA 16:12)

KHARLAMOV, Ya.I.

Unusual precipitations. Meteor. i gidrol. no.8:47 Ag '57.
(Snow) (MLRA 10:8)



ACC NR: AP6029619 (N) SOURCE CODE: UR/0114/66/000/008/

AUTHOR: Sennichenko, M. D. (Candidate of technical sciences); Vinnik, I. D. (Candidate of technical sciences); Kharlamov, Ye. G. (Engineer)

ORG: none

TITLE: Discharge coefficient of turbine nozzle cascades under static and dynamic conditions

SOURCE: Energomashinostroyeniye, no. 8, 1966, 15-17

TOPIC TAGS: turbine nozzle diaphragm, gas turbine, turbine design, fluid discharge coefficient, gas turbine, nozzle flow, turbine cascade

ABSTRACT: To verify thermal calculations of gas turbines produced at the Leningrad plant, the plant's aerodynamics laboratory is systematically conducting tests to determine flow discharge coefficients for turbine nozzle cascades. The results of an experimental investigation of the discharge coefficients of nozzle cascades with the blade geometry shown in Fig. 1 and Table 1 are presented. Tests were conducted at flow Mach numbers M = 0.3—0.9. The obtained results show that: 1) The discharge coefficient of a nozzle cascade, in contrast to the velocity coefficient, is very sensitive to changes in the shape of the cascade's geometric parameters and the structural and gasdynamic conditions at

UDC: 62-226.004.15

Card 1/3

ACC NR: AP6029619

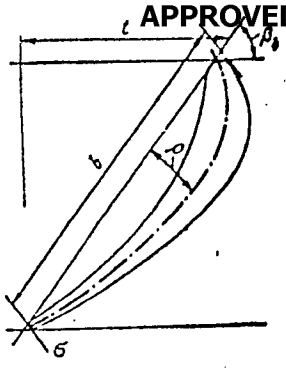


Fig. 1. Shape of nozzle blades tested.

Table 1. Geometric characteristics of the blades tested.

Blade no.	$\bar{\delta}$	$\bar{\varphi}$	$\bar{l}$	$\bar{t}$	β_b
1	$3.0 \cdot 10^{-2}$	0.160	1.91	0.47—1.05	42° 30'
2	$3.4 \cdot 10^{-2}$	0.228	1.88	0.50—1.05	46° 30'
3	$2.61 \cdot 10^{-2}$	0.176	1.93	0.65—1.13	52°
4	$2.62 \cdot 10^{-2}$	0.169	1.90	0.74—1.3	51° 30'
5	$1.7 \cdot 10^{-2}$	0.177	1.36	0.60—0.87	43°

the cascade inlet and exit. 2) To determine the maximal flow rate through a nozzle cascade, it is necessary to have its experimental characteristics. 3) Reliable flow discharge coefficient data can be obtained by wind-tunnel tests of annular cascades using the integral method, while maintaining geometric and gasdynamic similarity at the inlet and exit. 4) Additional investigation is needed to improve the

Card 2/3

KHARLAMOV, Ye.G., inzh.

Effect of the blocking of the nozzle rim section of a turbine on the consumption coefficient. Energomashinostroenie 9 no.10: 43-45 O '63. (MIRA 16:10)

SAVCHENKO, V.F.; KHARLAMOVA, A.I., mladshiy nauchnyy sotrudnik

Operation of a device for rapid determination of the technical ripeness of green peas. Kons. i ov. prom. 14 no.7:41-42 Jl '59. (MIRA 12:9)

1.Ispolnyayushchiy obyazannosti zaveduyushchego laboratoriyey ovoshchnogo i plodo-yagodnogo syr'ya Belorusskogo nauchno-issledovatel'skogo instituta pishchevoy promyshlennosti (for Savchenko). 2.Laboratoriya ovoshchnogo i plodo-yagodnogo syr'ya Bleorusskogo nauchno-issledovatel'skogo instituta pishchevoy promyshlennosti (for Kharlamova).
(Peas)

SAVCHENKO, V.F.; POLYAKOVA, N.A.; GOMEL'KO, A.M.; KHARLAMOVA, A.I.

Promising varieties of vegetable cultures for the canning industry of White Russia. Trudy BNIIPPT no.4:145-150 '61.

(MIRA 17:10)

L 14172-66 EWT(m)/EWP(j) WW/RM
ACC NR: AP6003935 SOURCE CODE: UR/0374/65/000/005/0003/0012

AUTHOR: Sukhareva, L. A. (Moscow); Voronkov, V. A. (Moscow); Kalinina, L. Ye. (Moscow); Kharlamova, A. M. (Moscow); Zubov, P. I. (Moscow); Vorontsova, O. I. (Moscow)

ORG: none

TITLE: Investigation of elastomers on the basis of binary and ternary systems

SOURCE: Mekhanika polimerov, no. 5, 1965, 3-12

TOPIC TAGS: elastomer, synthetic rubber, polyamide, polyvinyl chloride, ~~physical property~~ solid mechanical property, thermophysical property

ABSTRACT: Physicomechanical and thermophysical properties of elastomers on the basis of binary and ternary systems with different ratios of polyamide, polyvinyl chloride (PVC), and rubber have been investigated. The binary and ternary systems with optimal physicomechanical properties were chosen on the basis of composition property diagrams. A nonmonotonous change of physicomechanical properties of films with a certain ratio of the PVC and nitrile-acrylic acid was observed and is ascribed to chemical interaction. It was shown that stabilization of mechanical properties of polyamide in thermal aging can be accomplished by combin-

Card 1/2 UDC: 678:01.539.37

L 14172-66

ACC NR: AP6003935

ation with binary systems. Orig. art. has: 11 figures and 1 table. [Based on author's abstract].

SUB CODE: 11,07/ SUBM DATE: 05Apr65/ ORIG REF: 008/ OTH REF: 002

Card 2/2

KAGAN, Ye.G.; KLEBANSKIY, A.L.; KHARLAMOVA, A.V.

Synthesis of some ethoxysilanes and disiloxanes with 3,3,3-trifluoropropyl groups. Zhur.ob.khim. 33 no.2:704-705 F '63. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni S.V.Lebedeva.
(Silicon organic compounds) (Propane)

[illegible], I. A., [illegible], I. A.,

Geography & Geology

Street directory of the city of Moscow. Moskva, Izd-vo Ministerstva Kommunal'nogo khoziaistva RSFSR, 1951 .

Monthly List of Russian Accessions, Library of Congress, June, 1952 UNCLASSIFIED.

L 08321-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AR6033783 SOURCE CODE: UR/0058/66/000/007/D098/D098

AUTHOR: Yegorova, L. A.; Ivashevskiy, S. N.; Kharlamova, G. N. 19

TITLE: Testing spectral tubes with natural krypton 27

SOURCE: Ref. zh. Fizika, Abs. 7D783

REF SOURCE: Tr. in-tov Gos. kom-ta standartov, mer i izmerit. priborov SSSR. vyp 78(138), 1965, 29-31

TOPIC TAGS: krypton, spectral line, wavelength

ABSTRACT: Results of investigations of the radiation of spectral lamps filled with natural krypton are described. The values of wavelengths of eight lines of the visible region of the spectrum of natural krypton are obtained through comparison with the primary reference wavelengths of the orange Kr^{86} line. [Translation of abstract]

SUB CODE: 20/

Card 1/1 nst

USSR/Chemistry - Electrolytes
Chemistry - Galvanotechnics

Apr 49

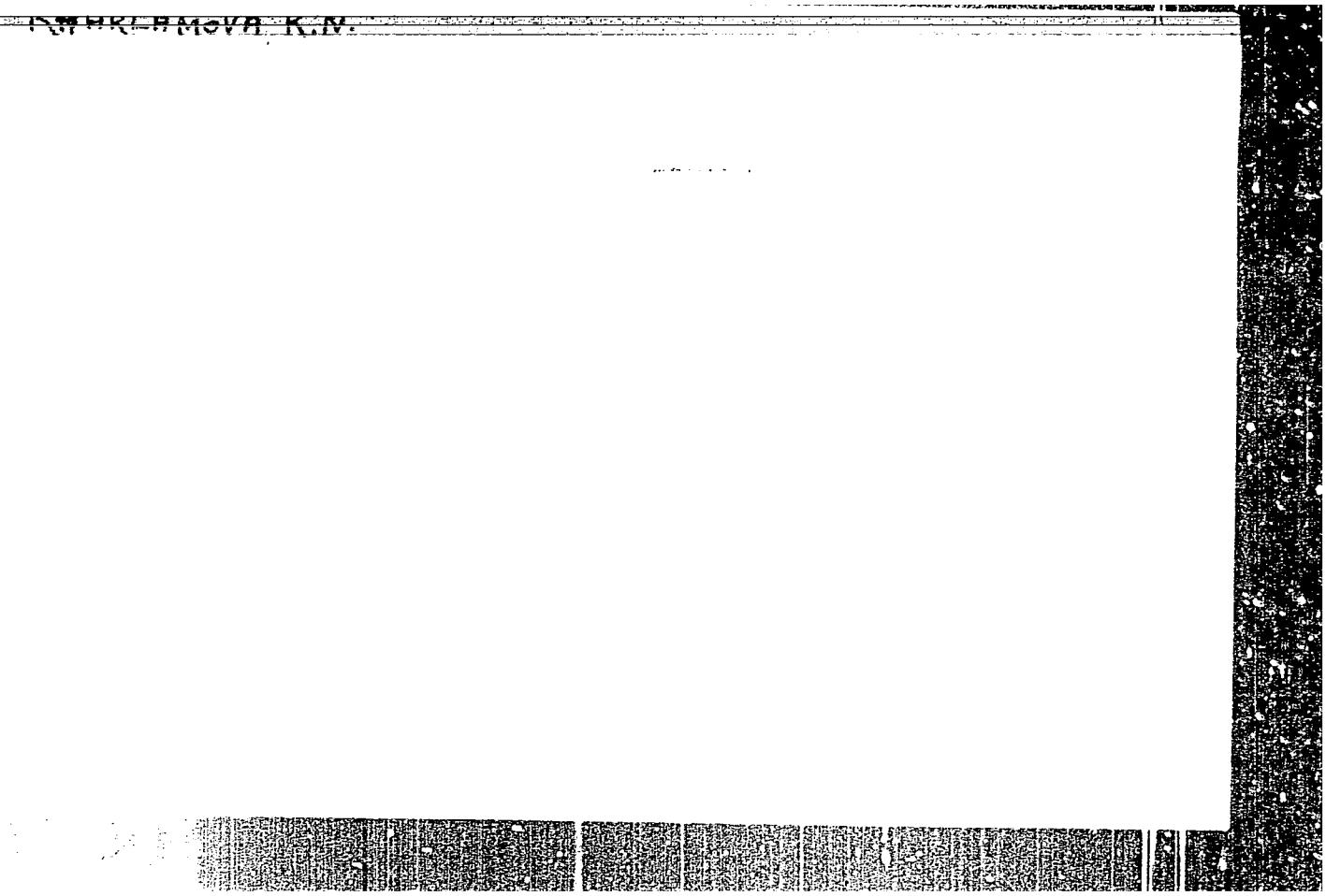
"Electrolytic Zinc Plating in Zinc Electrolytes at High Current Densities," K. T. Kudryavtsev, A. I. Lipovetskaya, K. N. Mikhailova, Lab of Galvanochem Metal Plating Sec MITKhLSH, 7½ pp

"Zhur Prik Khim" Vol XXII, No 4

Effect of special additions and mixing in zincate electrolytes on the limit of permissible cathode current density and the diffusion capacity of the bath was investigated. Only additions of Sn, Pb, and Hg have positive effects. Mixing increased the upper limit of permissible cathode current density.

Submitted 8 Apr 48

60/49T29



MORKHOV, M.I., kandidat tekhnicheskikh nauk; KHARLAMOVA, K.N., mladshiy nauchnyy sotrudnik.

The cohesion of nickel coatings with chemically pickeled, sand-blasted steel and mat finish nickel. Sbor.st.NIIKHIMMASH no.15:128-139 '54. (MLRA 10:1)

(Nickel plating--Testing)

KHARLAMOVA, K.N.

MORKHOV, M.I., kandidat tekhnicheskikh nauk; KHARLAMOVA, K.N., mladshiy nauchnyy sotrudnik.

Cohesion of nickel coatings with polished copper, steel, and nickel. Sbor.st.NIIKHIMMASH no.15:140-149 '54. (MLRA 10:1)
(Nickel plating)

Харламова К.Н.

MORKHOV, M.I., kandidat tekhnicheskikh nauk; KHARLAMOVA, K.N., mladshiy nauchnyy sotrudnik.

Porosity of gold coatings and the corrosion of gilded metals. Sbor. st. NIIKHIMMASH no.15:174-195 '54. (MLRA 10:1)
(Gold plating--Testing) (Corrosion and anticorrosives)

MORKHOV, M.A.; KHARLAMOVA, [redacted] DOKIN, N.I.

Nickel plating of weights of technical weight sets taking into consideration their given mass. Izm. tekh. no.3:31-33 My-Je '57.
(Weights and measures) (Nickel plating) (MLRA 10:8)

KHARLAMOVA, K.N., Cand Tech Sci -- (diss) "Cohesion of nickel plating with electrolytic nickel and steel." Mos 1958, 13 pp. with graphs (Min of Higher Education USSR. Mos Order of Lenin Chem Tech Inst im D.I. Mendeleyev) 150 copies (KL, 39-58, 110)

KHARLAMOVA, K. N.

[redacted]

5(4) PHASE I BOOK EXPLOITATION SOV/2216

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

Trudy...; [sbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A.N. Frumkin (Resp. Ed.) Academician, O.A. Yesin, Professor; S.I. Zhdanov (Resp. Secretary), B.N. Kabanov, Professor, S.I. Zhdanov (Resp. Secretary); B.N. Kabanov, Professor, Ya. M. Kolotyrkin, Doctor of Chemical Sciences; V.V. Losev, P.D. Lukovtsev, Professor; Z.A. Solov'yeva; V.V. Stender, Professor; and G.M. Florianovich; Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes in metal electrodepositon and industrial electrolysis. Abridged discussions are given at the end of each division. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

Card 19/34

MORKHOV, M.I., kand.tekhn.nauk; KHARLAMOVA, K.N., mladshiy nauchnyy sotrudnik.

Cohesion between nickel coating and low-carbon sandblasted steel.
Trudy NIIKHIMASH no.28:24-28 '59. (MIRA 15:6)
(Protective coatings) (Steel)

MORKHOV, M.I., kand.tekhn.nauk.; KHARLAMOVA, K.N., mladshiy nauchnyy sotrudnik; SEMIN, V.M., inzh.

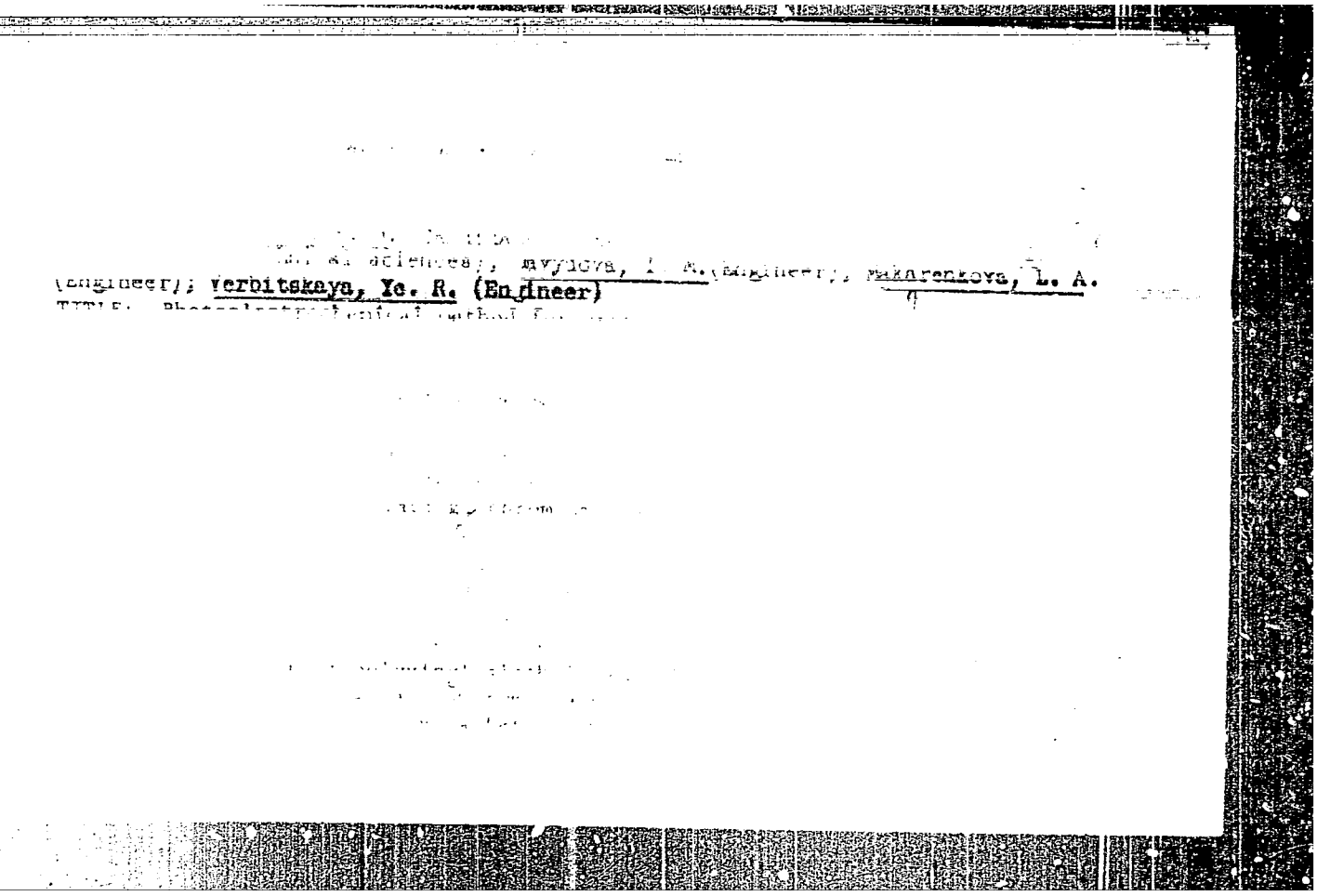
Galvanoplastic production of nickel linings for autoclaves. Trudy NIIKHIMMASH no.28:38-43 '59. (MIRA 15:6)
(Autoclaves) (Nickel plating)

KHARLAMOVA, K.N., mladshiy nauchnyy sotrudnik; MORKHOV, M.I.; kand.tekhn. nauk

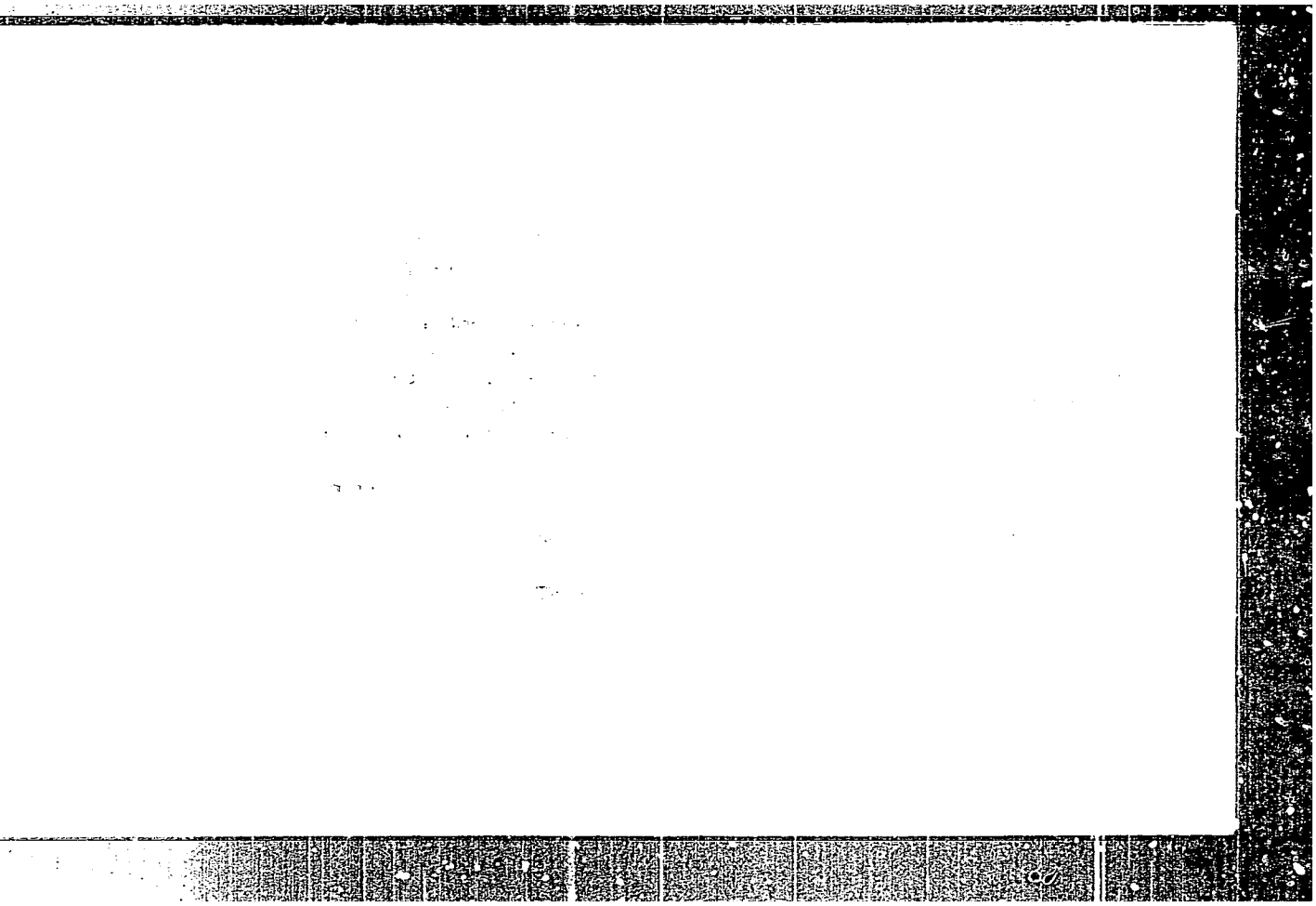
Cohesion between nickel coating and nickel, chromium, low-carbon and stainless steels and chromium-nickel alloy. Trudy NIIKHIMMASH no.28:12-24 '59. (MIRA 15:6)
(Protective coatings) (Nickel plating)

MORKHOV, M.I., kand.tekhn.nauk; KHARLAMOVA, K.N., mladshiy nauchnyy sotrudnik.

Porosity of galvanoplastic nickel coatings. Trudy NIIKHIMMASH no.28:44-54 '59. (MIRA 15:6)
(Protective coatings) (Nickel plating)



[illegible] Engineer); Verbitskaya, Ye. R. (Engineer)



L 6982-66 EPF(a)/EWP(e)/EWT(m)/EWP(i)/EWP(b)/EWA(d)/EWP(t) IJP(c) WJW/JD/JG/WB

ACC NR: AP5022657 SOURCE CODE: UR/0365/65/001/005/0500/0504

AUTHOR: Kudryavtseva, L. V.; Kharlamova, K. N.; Morkhov, M. I. 56 B

ORG: All-Union Research and Construction Institute of Chemical Machine-Building (Vsesoyuzniy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya)

TITLE: The platinum plating of Ti and Ta electrodes in amino-nitrite electrolytes

SOURCE: Zashchita metallov, v. 1, no. 5, 1965, 500-504

TOPIC TAGS: titanium, tantalum, metal plating, platinum, electrolyte deposition

ABSTRACT: The deposition of platinum on Ti and Ta electrodes was investigated. The electrodes were made of BT-1 Ti and TH-3 Ta, and had dimensions of 1x3x100 mm. These were initially cleaned by degreasing and etching, and subsequently used as anodes in two different amino-nitrite electrolytes, coded I and II: I - Pt (in the form $H_2PtCl_6 \cdot 6H_2O$), 10 g/l; $NaNO_2$, 280 g/l; NH_4NO_3, 100 g/l; NH_4OH (in the form of a 10% solution), 50 g/l; and II - Pt (in the form $H_2PtCl_6 \cdot 6H_2O$), 10 g/l; $NaNO_2$, 100-280 g/l; NH_4OH (in the form of a 10% solution), 1-2%. During platinizing, the

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L 6982-66
ACC NR: AP5022657

cathode current density for I and II varied from 2 to 10 amp/dm^2, and the temperature from 30 to 90°C. The following variables were studied for electrolytes I and II: the internal stress in the coatings, cathodic potential during deposition, the operative durability of the electrolytic solutions, current efficiency, and the porosity and dispersive quality of the Pt coating. In general, electrolyte II performs better - the optimum platinizing conditions are: temperature, 60-70°C; current density, 2-10 amp/dm^2 for the platinizing of Ti and 203 amp/dm^2 for Ta. Curves are given for internal stress (kg/cm^2) as a function of temperature of electrolization, and cathode current density. The change in potential with time is also shown for Ti in electrolytes I and II, and for Ta in electrolyte II, both at 70°C and at a current density of 2 amp/dm^2. Data on the dependence of cathodic potential during platinization in II vs the duration of electrolization for different temperatures is given for Ti. The cathodic potertials decrease with time up to a cut-off point (usually about 2-3 min), while the curve is displaced downwards with increase in temperature. The cathodic potential vs time curve for Ta is higher than that for Ti. The strength of the cohesive Pt coating can be increased by a factor of twenty-five, if the Ti and Ta electrodes are heat treated after platinization. The cohesive strength of Ti changes little in the temperature range 100-700°C (1,2 hrs), but in the interval 750-790°C (1,2 hrs) it increases from 0.3-1.4 kg/mm^2 to a maximum at

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L 6982-66
ACC NR: AP5022657

790°C of 25.4 kg/mm^2; then it decreases gradually above 800°C. The above data is for coating thicknesses of 5-7 μ, since thicker Pt coatings tend to crack readily. Orig. art. has: 4 figures, 2 tables.

SUB CODE: GC,MM/ SUBM DATE: 25Mar65/ ORIG REF: 007/ OTH REF: 001

Card 3/3 nb

KHARLAMOVA, K. S., EROKHINA, L. S., OBLENSKAIA, V. I.

Geography & Geology

Street directory of the city of Moscow. Moskva, Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR, 1951.

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

KHARLAMOVA, K.S.; YEROKHINA, L.A.; LAVOCHKIN, M.P., redaktor; DUNINA, A.N., redaktor; LIL'YE, A., tekhnicheskiy redaktor

[Moscow street directory; based on data as of April 30, 1955] Spravochnik ulits Moskvy; po sostoianiiu na 30 aprelia 1955 g. [Moskva] 1955. 452 p. (MLRA 8:7)

1. Moskovskaya gorodskaya spravochno-informatsionnaya kontora "Mosgorspravka," Moscow. Upravleniya predpriyatiy kommunal'nogo obsluzhivaniya Mosgorispolkoma.
(Moscow--Streets)

YEROKHINA, L.S.; KHARLAMOVA, K.S.; LAVOCHKIN, M.P., otvetstvennyy redaktor; LIL'YE, A., tekhnicheskiy redaktor

[Street directory of Moscow; as of November 1, 1956] Spravochnik ulits Moskvy. Po sostoianiiu na 1 noiabria 1956 g. Sost. L.S. Erokhina i K.S.Kharlamova. Otvet.red. M.P.Lavochkin. [Moskva, Izd-vo "Moskovskii rabochii"] 1956. 494 p. (MLRA 10:1)

1. Moskovskaya gorodskaya spravochno-informatsionnaya kontora "Mosgorspravka."
(Moscow--Streets)

NAZAROVA, O.M.; LOKSHINA, M.D.; POGORELKO, L.V.; TYMYANSKAYA, Ye.A.; TIKHOMIROVA, T.S.; MODILEVSKAYA, P.A.; KHARLAMOVA, K.S., LAVOCHKIN, M.P., otvetstvennyy redaktor; LIL'YE, A., tekhnicheskiy redaktor

[Moscow; a concise commercial and cultural directory. As of July 15, 1956] Moskva; kratkaia adresno-spravochnaia kniga. Po sostoianiiu na 15 iiulia 1956. [Moskva] 1956. 495 p. (MLRA 10:1)

1. Moskovskaya gorodskaya spravochno-informatsionnaya kontora "Mosgorspravka," Moscow.
(Moscow--Directories)

POGORELKO, L.V.; KHAHLAMOVA, K.S.; TYMYANSKAYA, Ye.A.; LOKSHINA, M.D.; VIKENT'YEVA, O.V.; LAVOCHKIN, M.P., otv.red.; RACHEVSKAYA, M.I., red.izd-va; GUROVA, O., tekhn.red.

[A concise handbook containing addresses of institutions, enterprises, and organizations concerned with cultural and social services for the population of the city of Moscow] Kratkii spravochnik adresov uchrezhdenii, predpriiatii i organizatsii po kul'turno-bytovomu obsluzhivaniiu naseleniia g. Moskvy. Po sostoianiiu na 25 dekabria 1953 g. Moskva, Izd-vo M-va kommun.khoz. RSFSR, 1954. 255 p. (MIRA 13:10)

1. Moskovskaya gorodskaya spravochno-informatsionnaya kontora "Mosgorspravka," Moscow.
(Moscow--Directories)

KHARLAMOVA, K.N., kand.tekhn.nauk; MORKHOV, M.I., kand.tekhn.nauk; NOVIKOV, O.P., inzh.; KORYAGINA, V.V., inzh.

Purification of nickel and copper plating electrolytes by the separation method. Khim.mash. no.2:23-26 Mr '62. (MIRA 15:3)

(Nickel plating) (Copper plating) (Electrolytes)

KHARLAMOVA, L., fotolyubitel'

In Italy with the "Kiev" camera. Sov.foto 20 no.4:46 Ap '60.
(MIRA 13:8)
(Italy--Description and travel)

KHARLAMOVA, L.P.; PRONINA, G.Ye., starshiy inzh.

Using new types of strips for spinning machinery. Tekst.prom. 22 no.1:43-44 Ja '62. (MIRA 15:2)

1. Zaveduyushchiy laboratoriyey fabriki imeni Lakina (for Kharlamova). 2. Laboratoriya fabriki imeni Lakina (for Pronina).
(Spinning machinery)

KHARLAMOVA, L. V.

KHARLAMOVA, L. V.: "High-speed methods of cutting trenches in rock". Moscow, 1955. Min Higher Education USSR. Moscow Inst of Nonferrous Metals and Gold imeni M. I. Kalinin. (Dissertation for the Degree of Candidate of TECHNICAL Sciences)

SO: Knizhnaya Letopis' No. 51, 10 December 1955

BOGOLYUBOV, B.P., professor, doktor tekhnicheskikh nauk; KHARLAMOVA, L.V., gornyy inzhener.

Sharing of the experience acquired and an analysis of the speed of trenching in rock. Gor.zhur. no.2:22-29 F '56. (MLRA 9:5)

1. Moskovskiy institut tsvetnykh metallov i zolota imeni Kalinina.
(Strip mining)

SUKHANOVSKIY, S.I.; AKHMINA, Ye.I.; YEVSTIFEYEVA, E.B.; KHARLAMOVA, M.V.

Chemical composition of the organic and ash parts of hydrolysis lignins. Gidroliz. i lesokhim. prom. 18 no.5:15-17 '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.

BRUK, A. M., Docent; VIL'YAMSKIY, M. P.; VOROB'YEVA, A.; KHAKLOVA, M.

Heart - Diagnosis

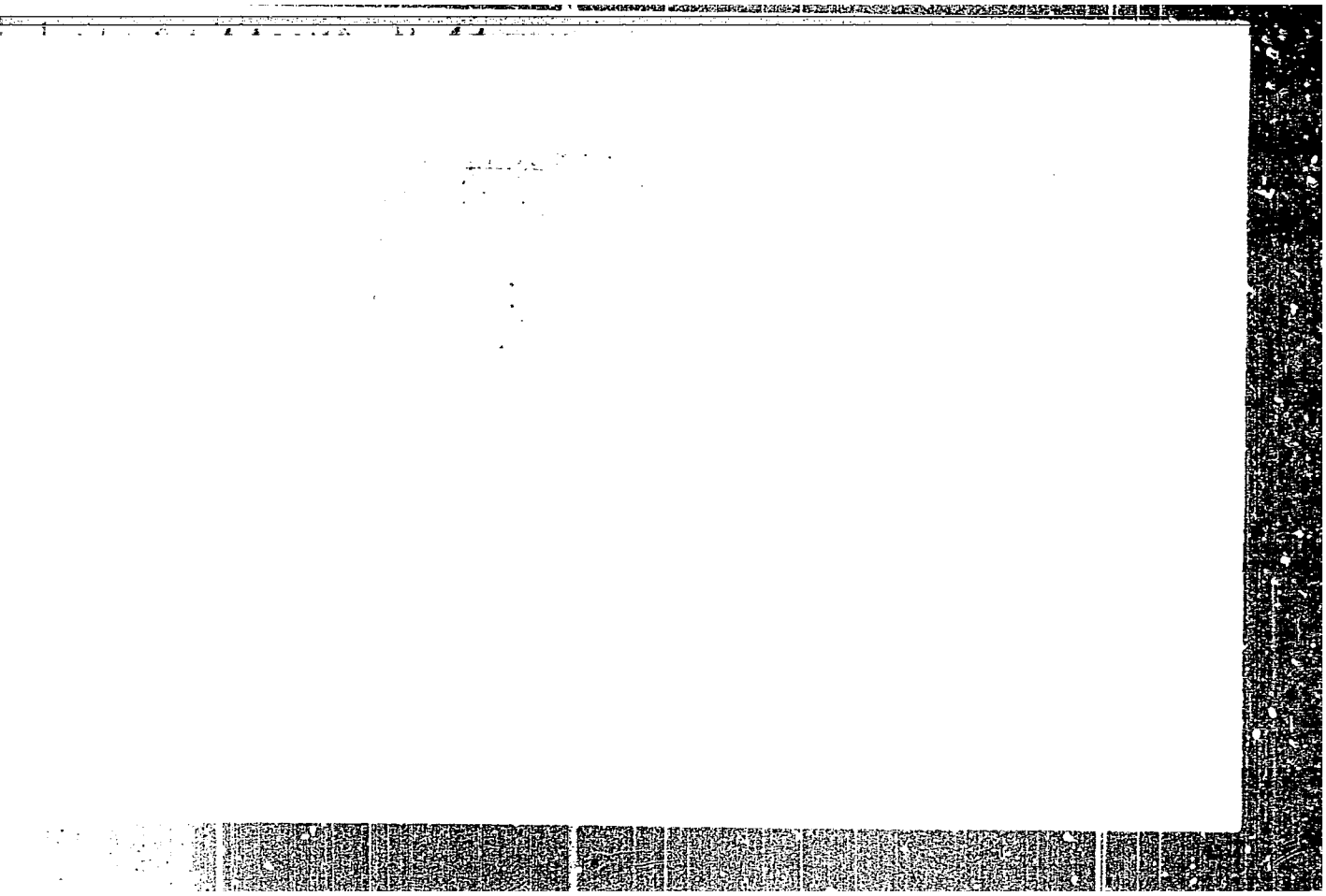
Methods of experimental contrast angiocardiography. Vest. rent. i rad. No. 1, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

KLIMOVA, O.M.; KURAS, A.M.; STEPANOV, V.V.; KHARLAMOVA, N.I.

Synthesis of polyvinylene glycol derivatives. Zhur.prikl. khim. 37 no. 5:1152-1155 My '64. (MIRA 17:7)

1. Leningradskiy Tekhnologicheskiy institut imeni Lensoveta.



APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721820019-1"

KHARLAMOVA, N.T.

Synoptic and climatic characteristics of fogs in the Nikolaev region. Trudy UkrNIGMI no.32:36-40 '62. (MIRA 16:11)

KHARLAMOVA, N.V.

136-6-10/26

AUTHOR: Vorob'yev, G.M. and Kharlamova, N.V.

TITLE: Micro-structure of Aluminium with Different Silicon and Iron Contents. (Mikrostruktura alyuminiya pri razlichnom soderzhanii kremniya i zheleza)

PERIODICAL: **Tsvetnyye** Metally, 1957, No.6, pp. 48 - 52 (USSR)

ABSTRACT: Little work has been done on the deleterious effect of silicon on the properties of aluminium and the considerable number of researches on the corresponding effect of iron have been mainly on such high-silicon and high-iron systems that the results are not entirely relevant to technical aluminium. In the present work the character of the structural components of the following alloys was studied by micro-structural examination (photo-micrographs are shown): Al - 2% Fe, Al - 2% Fe - 0.1% Si, Al - 1% Fe - 0.3% Si and Al - 0.3% Fe - 1% Si. The alloys were prepared by two methods: that of Lavrov and that of casting into chill moulds, from AV000 grade aluminium and Al-Fe and Al-Si alloys. The thin-walled ingot moulds used in the Lavrov dipping method were pre-heated to 500-550 °C, the chill moulds to 100-110 °C. In hyp-eutectic alloys without silicon a very fine eutectic structure was obtained. The structure coarsened as 0.1 to 0.3% silicon was added both to hypo- and also to hyper-eutectic alloys, partial or complete

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Micro-structure of Aluminium with Different Silicon and Iron Contents. 136-6-10/26

transformation of the eutectic into needle-like formations of the ferruginous component being obtained with the latter when chill-mould cast. All types of primary aluminium are hyper-eutectic (with respect to iron) and in these the fine eutectic structure is preserved when the iron content is > the silicon content; when the converse holds, the eutectic structure is lost and the iron-silicon component assumes the form of coarse needles situated at grain boundaries. The authors suggest that if these changes could explain the tendency of aluminium to hot-crack formation elements capable of modifying the structure of the second phase should be added.
There are 6 figures and 3 Slavic references.

ASSOCIATION: VAMI

AVAILABLE: Library of Congress

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Mechanical Properties of Al-Zn-Mg-Cu Alloys (cont.)

observed in the variations in δ at a given Zn content. 4. An increase in Zn content from 6 to 10% is accompanied by an increase in σ_b and a decrease in δ. At 10% Zn in certain cases σ_b attains 70 kg/mm^2 at 7% δ.

N. R.

1. Aluminum alloys--Mechanical properties 2. Copper--Metallurgical effects 3. Manganese--Metallurgical effects 4. Zinc--Metallurgical effects

Card 2/2

KHARLAMOVA, N. Ya., I. O. St. Nauchn. Sotr.

Sil'vestrov, A. D., Kand. Sel'skokhozyaystvennykh Nauk and Osmolovskiy, G. Ye., Kand. Biolog. Nauk

Leningradskiy Nauchno-Issledovatel'skiy Institut Akademii Kommunal'nogo Khozyaystva im. K. D. Pamfilova

Eksperimental'naya Proverka Dolgovremennosti Deystviya Antiseptikov, Primenyayemykh Pri Kapital'nom Remonte Zhilogo Doma. Page 41

SO: Sbornik Annotatsiy Nauchno-Issledovatel'skikh Rabot po Stroitel'stvu, Moscow, 1951

ALEKSANDROV, G.A.; PARLAMOVA, G.T.; [illegible], V...

Production of phthalic anhydrid. Nauch.-tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. 12 no.4:20-21 Ap '65.

(MIRA 18:6)

KHAHLAMOVA, S.

We wish them luck. Zdorov'e 6 no.1:16-17 Ja '60. (MIRA 13:4)
(HEART--SURGERY)

KHAKLAMOVA, S. (Ryazan')

In the Ryazan countryside. Zdorov'e 6 no.3:7-8 Mr '60. (MIRA 13:5)

(RYAZAN PROVINCE--COLLECTIVE FARMS)

KHARLAMOVA, S.

Before and after illness. Zdorov'e 6 no.8:11-12 Ag '60. (MIRA 13:8)

(DYSENTERY)

KHARLAMOVA, S.

The invisible reveals its secrets. Zdorov'e 6 no.12:7-8 D '60. (MIRA 13:12)

(INFLUENZA) (VIRUS RESEARCH)

KHARLAMOVA, S.

We are confident of success. Zdorov'e 7 no.10:26-27 O '61.
(MIRA 14:10)
(OKTYABR'SKIY--TUBERCULOSIS--HOSPITALS AND SANATORIUMS)

KHARLAMOVA, S.

Familiar and new features. Zdorov'e 7 no.11:21-22 N '61.
(MIRA 14:11)

(SEVASTOPOL—PUBLIC HEALTH)

KHARLAMOVA, S.

Human beauty. Zdorov'e 8 no.4:3-4 Ap '62. (MIRA 15:2)
(BEAUTY, PERSONAL) (HYGIENE)

KHARLAMOVA, S.

First ai . Zdorov'e 9 no.1:4-5 Ja'63. (MIRA 16:7)
(MOSCOW—AMBULANCE SERVICE)

KHARLAMOVA, S.A.

Sincere people, skilled hands. Zdorov'e 5 no.2:16-17 F '59.
(MIRA 12:2)

(MOSCOW--HOSPITALS)

KHARLAMOVA, T. A.

NABOKOV, V.A.; POPOV, S.D.; LAYUKHIN, M.A.; KHARLAMOVA, T.A.

The helicopter and prospects for use in the control of arthropod vectors of human disease [with summary in English]. Med.paraz. i paraz.bol. 26 no.1:5-11 Ja-F '57. (MLRA 10:6)

1. Iz sektora profilaktiki infektsiy Instituta malyarii, meditsinskoy parazitologii i gel'mitologii Ministerstva zdravookhraneniya SSSR (dir. instituta - prof. P.G.Sergiyev, nav. sektorom prof. V.A.Nabokov)

(ARTHROPODS, prev. and control
insecticide spraying with helicopter)
(INSECTICIDES
spraying with helicopter)

ABRAMOV, V.V.; KHARLAMOVA, T.I., red.; VERKHOVSKIY, A.V., tekhn.red.

[Investigation of stresses and displacements by means of the method of the dismemberment of a body] Issledovanie napriazhenii i peremeshchenii metodom raschlenoniia tela. Gor'kii, Politekhnicheskii in-t, 1960. Lecture 1.[General solution of the problem of calculating stresses and displacements in straight rods] Obshchee reshenie zadachi o vychislenii napriazhenii i peremeshchenii v priamykh sterzhniakh. 12 p. Lectures 2-4.[Tension and compression of a straight rod. Bending of a straight rod. Gold and hot straightening of rods]Rastiazhenie - szhatie priamogo brusa. Izgib priamogo brusa. Kholodnaia i goriachaia pravka sterzhnei. 53 p. (MIRA 17:2)

81355

S/181/60/002/03/09/028
B006/B017

24.7700

AUTHORS: Kharlamova, T. Ye., Kholuyanov, G. F.

TITLE: Electrical Properties of Melt p-n Junctions in Silicon Carbide

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 3, pp. 426-433

TEXT: The light-green α-SiC single crystals (n-type) which were necessary for the investigations were supplied by the Zaporozhskiy karborundovyy zavod (Zaporozh'ye Carborundum Works); the resistivity of the crystals was 2 - 2.5 ohm.cm. The production of the element with which the investigations were carried out is described at the beginning. It is schematically shown in Fig. 1. It consisted of several layers of varying diameters of W, Si + WC, n-type SiC, p-type SiC, and Si-Al alloy which fused in hydrogen atmosphere. The current-voltage characteristics of these elements (Figs. 2 - 5) were recorded in the temperature range 20 - 500°C. For the p-n junction, the saturation current was calculated

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Electrical Properties of Melt p-n Junctions in Silicon Carbide

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from the formula $I_s = Se \frac{D_p N_c N_v}{L_p n_n} \exp(-E_g/kT)$, where S is the p-n junction area (in the samples investigated 0.011 and 0.018 cm^2), D_p, the hole diffusion coefficient, was assumed to be 0.25 cm^2/sec and the electronic mobility n_n to be 100 cm^2/sec.v. The width of the forbidden zone E_g was 2.86 ev. The time constant of the decrease in recombination luminescence for both samples was between 1 and 0.2 μsec, so that with a hole diffusion length between 5 and 0.5 mμ and at 20°C the saturation currents were computed to be between 10^{-38} and 10^{-37}a. On the basis of measurements of the dependence of the intensity of recombination luminescence on the voltage, the rules governing the increase of the current component due to diffusion with increasing voltage were investigated. For the direct direction in sample 1 it is found that the diffusion component increases proportionally to $\exp(eV_1/1.4\ kT)$, in sample 2 proportionally to $\exp(eV_1/3kT)$. In these investigations the voltages were below 2.5 v. In the following, a report is given on investigations of the influence exercised by defects and current leakage in p-n junctions on current-

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Electrical Properties of Melt p-n Junctions in Silicon Carbide

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B006/B017

voltage characteristics. In the entire voltage range investigated the reverse current increased with increasing voltage more rapidly than linearly. In the range of strong reverse currents phenomena were observed, which indicated the avalanche-like character of the discharge at the periphery of the p-n junction and in the region of the defects. Finally, capacitance measurements of p-n junctions and their voltage and temperature dependences are described. A possibility of using p-n junctions in silicon carbide as nonlinear condensers is discussed. In conclusion, the authors thank Professor N. P. Bogoroditskiy and V. V. Pasynkov for their interest, as well as E. A. Violin and F. G. Tomashpol'skiy, students of LETI, for their assistance in the experiments. O. V. Losev is mentioned. There are 6 figures and 14 references: 3 Soviet, 7 US, 2 German, and 1 Swiss.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Electrotechnical Institute imeni V. I. Ul'yanov (Lenin))

SUBMITTED: June 4, 1959

Card 3/3

9,4310 (1139,1150,1159)
15.2420

28214
S/194/61/000/005/048/078
D201/D303

AUTHOR: Kharlamova, T.Ye.

TITLE: Manufacturing technology of silicon carbide rectifying elements

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 5, 1961, 4, abstract 5 D34 (Izv. Leningr. elektrotekhn. in-ta, 1960, no. 43, 135-140)

TEXT: At 18-20°C the width of the forbidden zone of the silicon carbide is about 3 eV, the effect being that the rectifying properties of SiC are retained at much higher temperatures than those of Ge and Si. The intrinsic electrical conductivity occurs at temperatures > 1000°C. The intrinsic electrical conductivity of SiC p-n junctions at 20°C is of the order 10^{-13} ohm^{-1} cm^{-1}. The junctions sustain large reverse voltages at very small reverse currents. The SiC has not liquid phase; the vaporization temperature is about 2500°C. P-n junctions in SiC crystals may be made

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taining p-n junctions should be carried out in the atmosphere of purified H_2 which was obtained by the electrolysis method. For purification H_2 was passed through a heated palladium filter and containers with calcium chloride. The results of the analysis of the samples obtained will be given in the next article 6 refer. ences [Abstracter's note: Complete translation]

Card 3/3

24,7800 (1136, 1145, 1153)

S/058/61/000/005/034/050
A001/A101

AUTHORS: Kholuyanov, G.F., Kharlamova, T.Ye.

TITLE: Properties of p - n transitions in silicon carbide

PERIODICAL: Referativnyy zhurnal. Fizika, no 5, 1961, 292, abstract 5E428 ("Izv. Leningr. elektrotekhn. in-ta", 1960, no 43, 141 - 149)

TEXT: The authors investigated electric properties of molten-in p - n transitions in SiC. Voltampere and capacitance characteristics were measured in the temperature range from room temperature to 500°C (at heating up to 600°C an irreversible increase of reverse current through the transition was observed). The maximum current density of ~90 amp/cm^2 was determined for specimens investigated. The voltampere curves in the back direction have the appearance (in semilogarithmic scale) of a broken line composed of three straight sections with increasing slope. The positions of the deflection points relative to the axis of stresses depends on temperature insignificantly. The experimental data obtained can not be explained with the aid of the simple diode theory. It is assumed that leakage currents play an essential part in transitions from SiC, and the current through the transition in the back direction is determined by them entirely. The

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Properties of p-n transitions in silicon carbide

S/058/61/000/005/034/050
A001/A101

form of dependence of the diffusion component of direct current was determined from the voltage dependence of intensity of the yellow-green luminescence in the transition. The results obtained agree well with the estimate of diffusion length of holes, made on the basis of measuring the time constant of luminescence fading. It is assumed that the non-linear growth of reverse current through the transition is, already at low voltages, connected with ionization by the electric field of impurities which are still available in the given temperature range. Electric field intensity, estimated from capacitance measurements, turn-out to be 10^6 v/cm. Apparently, near various defects of the lattice field intensity is considerably higher. At high voltages at the transition, the growth of current is due to cascade spark-over. Investigations of capacitance characteristics of transitions from SiC have shown that the capacitance of the transition did not practically change with frequency with the range from 0.1 to 75 kc and increased with the temperature rise. It is presumed that p - n transitions from SiC can be utilized as non-linear capacitors in the mode without bias in the back direction.

V. Pokalyakin

[Abstracter's note: Complete translation.]

Card 2/2

ACCESSION NR: AP4013538 S/0181/64/006/002/0642/0644

AUTHORS: Kharlamova, T. Ye.; Tairova, D. A.

TITLE: The effect of radioactive radiation on the properties of silicon carbide p-n junctions

SOURCE: Fizika tverdogo tela, v. 6, no. 2, 1964, 642-644

TOPIC TAGS: radioactive radiation, silicon carbide, p n junction, volt ampere characteristic, transitional photoelectric effect, photosensitivity, impurity, impurity concentration

ABSTRACT: The authors used electron-type samples of SiC (with alpha modification) with impurity concentrations on the order of $5 \cdot 10^{17} cm^{-3}$. The p-n junctions were prepared by a technique previously described by T. Ye. Kharlamova (Izv. LETI im. V. I. Ul'yanova (Lenina), vyp. XLIII, 135, 1960; and T. Ye. Kharlamova, G. F. Kholuyanov. FTT, 2, 426, 1960). Each crystal was cut into two plates, only one being exposed to radiation for control. Radiation, varied from 3000 to 28 000 roentgens seemed to effect only insignificantly quantitative changes in the characteristics of the p-n junctions in SiC. Radiation of all p-n junctions

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ACCESSION NR: AP4013538

by gamma rays or beta quanta produced definite patterns of changes in the volt-ampere characteristics. These patterns are shown in Fig. 1. in the Enclosure. Mixed radiation led to the appearance of a transitional photoelectric effect. The p-n junctions in SiC after such irradiation become sensitive to the visible part of the spectrum. The photosensitivity of the p-n junctions was shifted toward the longer wavelengths. This shift may be due to metastable energy levels in the SiC due to the action of gamma rays plus neutrons. Orig. art. has: 1 figure.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova-Lenina (Leningrad Institute of Electrical Engineering)

SUBMITTED: 28Sep63 DATE ACQ: 03Mar64 ENCL: 01

SUB CODE: PH NO REF SOV: 006 OTHER: 001

Card 2/2

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